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Seattle, WA 98118

EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/025,002 | Applicant(s) SHAN, JESSE CHIENHUA | |
| | Examiner John Hoffmann | Art Unit 1731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3: the term “substantially triangular shape” and/or “triangular shape” is indefinite as to what it means. First: the term is not defined in the specification. Second, examiner could find no definition for “triangle” in a dictionary that is commensurate with what is disclosed to be a triangle in Applicant’s figure 3. Third, Examiner would never consider feature 301 of applicant’s figure3 to be a triangle. Fourth, one of ordinary skill would be unable to determine whether a particular shape reads on Applicants present claim because Applicant has not set forth what is meant by the term. Lastly it is noted that the specification does not clearly set forth an explicit definition, thus Applicant is not acting as lexicographer. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F3d 985, 989 (Fed. Cir.1999).

It is unclear if the forming of claim 3 is in addition to the forming of claim 1, or if it is an additional forming step. Claim 4, it is unclear if the claim is directed further limiting the forming, or if it is an addition to the forming: it appears that there is improper double inclusion of the same step.

Claims 6,7,9, 12, and 14-16 are indefinite for substantially the same reasons claims 3-4 are.

Claim 3 line 4 refers to "said waveguide support", but lines 2-3 refers to "at least one waveguide support". It is unclear if there are multiple supports, if there must be core material on each of the supports, or if only one support must have the core material. In other words, it is unclear if an identical process but with a support without material would avoid infringement. Note that dependent claims also refer to just one support. The claim 11 set of claims also has similar problems.

Claims 7 and 14: the term "semi-circular" shape is indefinite as to its meaning. Page 12, lines 4-5 indicates that 301 is has a semi-circular shape. Applicant must be using a definition for semi-circle that is far different from the ordinary and customary definition. One of ordinary skill would not be able to determine what is meant by the term.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 5 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruce 5119460.

Looking at figure 1 of Bruce, 20 is the lower cladding layer which as a waveguide support 30. Although Bruce doesn't call it a support, it does support the waveguide 40. Applicant has not defined "waveguide support" in a manner which would preclude 30 from being considered a waveguide support. 50 is the upper cladding layer. Figure 4 shows all the steps.

Claim 2 is clearly met.

Claim 3 requires that the core material is formed "to be a substantially triangular shape". It is deemed that core is a triangular shape in that it has at least three angles. From Applicant's drawing, it is clear that Applicant does not intend limit the claims to any customary meaning of "triangular". Since Applicant does not define what is meant by triangular, it is deemed that the broadest reasonable interpretation is: a figure with at least three angles.

Alternatively, the phrase "to be" reasonably signifies an intention. Whereas, such a phrase can also reasonably convey a result, the Office interprets claims with their

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broadest reasonable interpretation. Presently, the expression of an intended result creates a broader claim than would the expression of an actual result. Therefore the Office interprets the claim using the broadest meaning, namely the claim requires the intention of a result. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The intention "to be" a shape does not require a step of forming the shape – rather one must have the mental intention of creating a triangle. Such is not a manipulative difference. Claim 7 is met for the same reason.

Claim 5: see col. 3, line 46.

Claim 8: see claim 1 of Bruce.

Claim 9: figure 1 shows the substrate 10: the other layers are formed in situ – i.e. on top of the substrate.

Claim 10: the claim does not limit which height. It is deemed the Bruce width is much less than the height of Mt. Everest.

Claims 1, 4, 6, 11-12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Bazylenko 6154582.

Figures 6a-h show the invention. Looking specifically at 6e: 13 is the lower cladding. The cross-sectional image shows a waveguide support. 14 is the core material. 22 clads the core.

Claim 4: see claim 5 of Bazylenko.

Claim 6: figures 6a and 6b (and the associated text) disclose the patterning and etching. Col. 8, lines 15-19 discloses the depositing.

Claim 11: see above for how the limitations are met. For the additional limitation that the core material is an oxide, claim 2 indicates the material is silica, an oxide of silicon.

Claim 12 is met: see how claim 6 is met.

Claims 14-16 are met for substantially the same reasons that Bruce reads on the Broad limitations of claims 7-9.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bazylenko as applied to claim 11 above, and further in view of Bruce 5119460.

Bazylenko does not disclose using a rare earth. Bruce teaches to have a rare earth (erbium) in planar waveguides so as to make optical amplifiers. It would have

been obvious to add erbium to the Bazilenko process/core so as to make an amplifier when needed, so as to permit one to amplify weak optical signals.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nijander, TumminelliThomas, Korenaga, Tregoat, Nourshargh, Tangonan, Zhong, Ono, ShanTsai, Nakazawa, Polaert, Jain, Bhagavatula, Greene, Imoto, Tumminelli and Komiyama are cited as being directed to the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann

4-22-04

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Primary Examiner
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jmh